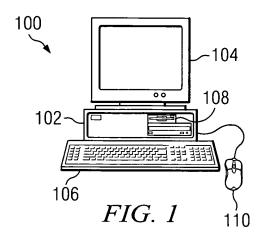RSW920030277US1
Jamison
Method for Determining a Close Approximate Benefit
of Reducing Memory Footprint of a Java Application
1/3

FIG. 1

FIG. 2

RSW920030277US1
Jamison
Method for Determining a Close Approximate Benefit
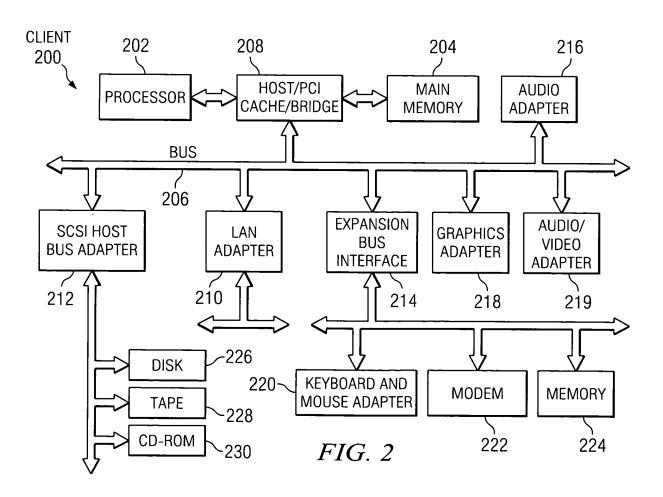of Reducing Memory Footprint of a Java Application
2/3

FIG. 3

FIG. 4

RSW920030277US1
Jamison
Method for Determining a Close Approximate Benefit
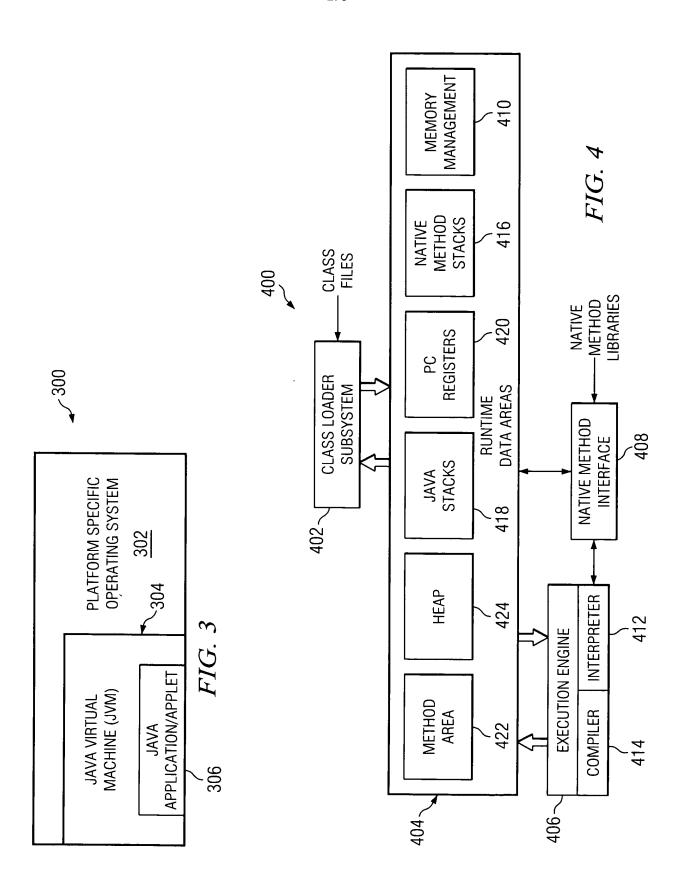of Reducing Memory Footprint of a Java Application
3/3

START

602 — INFORMATION IS OBTAINED
ABOUT GARBAGE COLLECTION

604 — ASSUMPTIONS ARE FORMED
ABOUT THE COMPUTER
SYSTEM AND PROGRAM

606 — AN AVERAGE DURATION OF GARBAGE
COLLECTION EVENTS AND A
FREQUENCY OF GARBAGE
COLLECTION EVENTS IS DETERMINED

608 — A PERCENTAGE OF TIME SPENT ON
GARBAGE COLLECTION IS ESTIMATED

610 — AND A PERCENTAGE OF TIME
SPENT DOING OTHER WORK IN THE
COMPUTER SYSTEM IS ESTIMATED

612 — A TYPICAL GARBAGE COLLECTION
EVENT IS ESTIMATED USING THE
AVERAGE AMOUNT OF LIVE
MEMORY AND LENGTH OF
GARBAGE COLLECTION EVENTS

614 — THE AMOUNT OF TIME SPENT ON
EACH MEMORY UNIT FOR GARBAGE
COLLECTION IS CALCULATED

616 — AN AMOUNT OF TIME SAVED
DOING GARBAGE COLLECTION BY
REDUCING MEMORY BY A GIVEN
AMOUNT IS CALCULATED

618 — CALCULATE THROUGHPUT
IMPROVEMENT

END

FIG. 6

START

502 — INFORMATION FROM AN
APPLICATION RELATING TO
GARBAGE COLLECTION IS
OBTAINED

504 — TEST IF SYSTEM
SATISFIES "STEADY
STATE" ASSUMPTIONS

506 — GIVEN THE OBTAINED
INFORMATION AND
ASSUMPTIONS, AN ESTIMATE
IS FORMED ABOUT HOW
MUCH TIME WILL BE SAVED
ON GARBAGE COLLECTION BY
REDUCING MEMORY OF THE
PROGRAM FOOTPRINT BY A
GIVEN AMOUNT

END

FIG. 5